WHAT IS CLAIMED IS:

1. A method of visualizing a real 3-D object by a user using a computer, comprising the steps of:

capturing the images of the object as a sequence of images;

encoding the sequence of images as video having video frames; and

viewing the object in 3-D by random access of the video.

2. The method of claim 1, wherein step of capturing is performed by

taking samples of the images of the object from a viewing angle of an azimuth angle θ and an elevation angle ϕ in the spherical coordinates.

3. The method of claim 2, wherein the video frames are tagged with θ and ϕ.

4. The method of claim 2, wherein the step of taking samples uses a slicing sampling technique where a series of samples are taken with θ updated in constant steps and with ϕ fixed before another series of samples are taken with the updated ϕ.

5. The method of claim 2, wherein the step of taking samples uses an anisotrophic spiral sampling technique, where a series of samples are taken with θ and ϕ changed in constant steps.

6. The method of claim 2, wherein the step of taking samples uses an isotrophic spiral sampling technique, where a series of samples are with θ and ϕ changed so that the distance between two adjacent samples is substantially equal.

7. The method of claim 1, wherein the video is streamed so that the viewing can start as soon as one or more frames have been received.

8. The method of claim 1, wherein the step of encoding includes the step of compressing the video.

9. The method of claim 8, wherein the step of compressing uses MPEG.

10. The method of claim 8, wherein the step of compressing uses H.261.

11. The method of claim 8, wherein the step of compressing uses H.263.

12. The method of claim 8, wherein the step of compressing uses H.263+.

13. The method of claim 1, wherein the step of viewing includes the step of pre-decoding the video for real-time display.

14. The method of claim 1, wherein the video is compressed using MPEG and the step of viewing the object includes the step of streaming I frames followed by P frames followed by B frames.

15. The method of claim 1, wherein the step of viewing the object includes the step of streaming the most important frames first.

16. The method of claim 1, further including the step of editing the captured images before encoding.

17. The method of claim 1, further comprising the step of manipulating the object while viewing the object.

18. The method of claim 17, wherein the step of manipulating includes the step of rotating the object.

19. The method of claim 17, wherein the step of manipulating includes the step of zooming the object.

20. The method of claim 17, wherein the step of manipulating includes the step of manipulating the object in the NEWS (north-east-west-south) mode, where the object is rotated along the east-west direction or along the north-south direction.

21. The method of claim 17, wherein the step of manipulating includes the step of manipulating the object in the AVIATION mode, where the object is rotated along the direction of the two orthogonal great circle of a sphere having the object at the center.

22. The method of claim 1, further comprising the step of storing the image sequence in a database.

23. The method of claim 22, wherein the database is a centralized database.

24. The method of claim 22, wherein the database is a distributed database.

25. The method of claim 22, wherein the database is accessed through a network.

26. The method of claim 25, wherein the network is the Internet.

27. The method of claim 26, further comprising the step of publishing the URL corresponding to the location of the image sequence within the database.

28. The method of claim 27, wherein the URL is password protected.

29. The method of claim 1, wherein the step of viewing including the step of downloading a separate multimedia stream.

30. The method of claim 29, wherein the separate multimedia steam includes zoom data requested by the user.

31. The method of claim 26, wherein the separate multimedia stream includes other related data requested by the user.

32. The method of claim 31, wherein the related data is video.

33. The method of claim 31, wherein the related data is still images.

34. The method of claim 31, wherein the related data is sound.

35. The method of claim 31, wherein the related data is coordinates of points on the object.

36. A system of visualizing a real 3-D object by a user using a computer, comprising the steps of:

an image capture device for capturing images of the object as a sequence of images;

an encoder for encoding the sequence of images as video having video frames; and

a viewer for viewing the object in 3-D.

37. The system of claim 36, wherein the image capture device includes a camera.

38. The system of claim 36, wherein the image capture device has means for taking samples of the images of the object from a viewing angle of an azimuth angle θ in the horizontal plane and an elevation angle ϕ from the horizontal plane.

39. The system of claim 38, wherein the video frames are tagged with θ and ϕ.

40. The system of claim 36, wherein the video is streamed so that the viewing can start as soon as one or more frames have been received.

41. The system of claim 36, wherein the encoder includes a video compressor for compressing the video.

42. The system of claim 41, wherein the video compressor is an MPEG encoder.

43. The system of claim 41, wherein the video compressor is an H.261 encoder.

44. The system of claim 41, wherein the video compressor is an H.263 encoder.

45. The system of claim 36, wherein the viewer includes a look-up-table (LUT) for mapping the view angle to a frame number.

46. The system of claim 36, wherein the viewer includes a pre-decoder for pre-decoding the video for fast retrieval.

47. The system of claim 36, further including an editor for editing the captured images after encoding.

48. The system of claim 37, wherein the viewer includes means for manipulating the object while viewing.

49. The system of claim 37, further comprising a database for the image sequence in a database.

50. The system of claim 49, wherein the database is a centralized database.

51. The system of claim 49, wherein the database is a distributed database.

52. The system of claim 49, further comprising a network for access the database.

53. The system of claim 52, wherein the network is the Internet.

54. A program product for viewing and manipulating a real 3-D object, which can run at a computer to perform the steps of:

capturing the images of the object as a sequence of images;

encoding the sequence of images as video having video frames;

storing the video in a database;

viewing the object in 3-D through random access of the video; and

manipulating the object in 3-D.

55. The program product of claim 54, wherein the video is encoded using MPEG.

56. The program product of claim 54 wherein the database is accessed through the Internet.

57. The method for enabling a user to visualize and manipulate a real 3-D object, comprising the steps of:

capturing the images of the object as a sequence of images;

encoding the sequence of images as video having video frames;

storing the video in a database; and

sending the video at the request of the user over a network.

58. The method of claim 57, wherein the video is encoded using MPEG.

59. The method of claim 57, wherein the network is the Internet.

60. The method of claim 57, further comprising the steps of:

receiving the video by a user;

viewing the object in 3-D through random access of the received video; and

manipulating the object in 3-D.

61. A method of visualizing 3-D volume data of an object, comprising the steps of:

capturing the 3D volume data as a stack of 2D tomographic images of the object;

obtaining a sequence of projected 2D images by projecting the 3D volume data at prescribed azimuth and elevation angles;

encoding the sequence of projected 2D images wherein each images are tagged with azimuth and elevation angles;

storing the sequence of 2D images; and

viewing the object in 3-D by random access of stored 2D image sequence.

62. The method of claim 61 wherein the step of capturing the 3D volume data uses positron emission tomography (PET).

63. The method of claim 61, wherein the step of capturing the 3D volume date uses single positron emission computed tomography (SPECT).

64. The method of claim 61, wherein the step of capturing the 3D volume data uses X-ray computed tomography (CT).

65. The method of claim 61, wherein the step of capturing the 3D volume data uses ultrasound imaging.

66. The method of claim 61, wherein the step of capturing the 3D volume data uses magnetic resonance imaging (MRI),

67. The method of claim 61 wherein the step of encoding includes video encoding using MPEG.

68. The method of claim 61, wherein the object includes human bodies.

69. The method of claim 61, wherein the object includes biological tissues.

70. The method of claim 61, wherein the object includes organic materials.

71. The method of claim 61, wherein the object includes inorganic materials.

72. The method of claim 61, further comprising the step of manipulating the object.

73. The method of claim 72, wherein the step of manipulating includes the step of rotating the object.

74. A method of visualizing 3-D volume data of an object, comprising the steps of:

obtaining a sequence of 2D images at prescribed azimuth and elevation angles rendered by a CAD program;

encoding the sequence of 2D images where each images are tagged with azimuth and elevation angles;

storing the sequence of 2D images; and

viewing the object in 3-D by random access of stored 2D image sequence.

75. The method of claim 74, wherein the step of encoding includes video encoding using MPEG.

76. The method of claim 74, further including the step of manipulating the object.

77. The method of claim 76, wherein the step of manipulating includes the step of rotating the object.

78. A method of providing a customer with a one-stop service for 3-D visualization of a real object over the Internet, comprising the steps of:

receiving the object from the customer;

capturing images of the object as a sequence of images each images tagged with an azimuth angle θ and an elevation angle ϕ in the spherical coordinates; and

storing the image sequence in a database for transmission over the Internet at the request of a user.

79. The method of claim 78, wherein the image sequence is assigned a URL for a user of the Internet to access the image sequence.

80. The method of claim 79, wherein the accessed image sequence is used to view the object in 3-D by the user.

81. The method of claim 79, wherein the accessed image sequence is used to manipulate the object in 3-D by the user.

82. The method of claim 78, wherein the image sequence is encoded as video.

83. The method of claim 82, wherein the video encoding uses MPEG.